

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): A carrying device for carrying a preform in an oven, the preform including a body and a tubular neck, the carrying device comprising:

a gripping device having gripping claws which enclose an outer surface of the neck to hold the preform;

an inner core which penetrates axially inside the neck of the preform, the inner core having a lower transverse surface; and

the inner core comprising at least one fin which extends radially and is operative to dissipate heat that is absorbed by the inner core, the at least one fin not being in contact with the preform, such that an open channel radially extends from an inner portion of the core along the at least one fin to the neck of the preform to provide an open space inside the preform which is bound by an inner periphery of the neck.

2. (previously presented): The carrying device according to claim 1, wherein the diameter of the core is substantially equal to, but less than, the inside diameter of the neck of the preform.

3. (previously presented): The carrying device according to claim 1, wherein the fin is in the form of a radiator .

4. (previously presented): The carrying device according to claim 1, wherein the gripping claws are made in the form of a bell open at the bottom, inside of which, the neck of the preform is axially engaged, the bell being provided with a series of radial slots that are angularly distributed so as to delimit, between two successive slots, one gripping claw that is elastically radially deformable.

5. (previously presented): The carrying device according to claim 4, wherein the bell is formed from a circular upper transverse plate, from which a tubular skirt extends axially downward, the inside diameter of the skirt, at least for part of its length, having a smaller diameter than the outside diameter of the neck, so that the claws engage on the neck by tightening it radially.

6. (previously presented): The carrying device according to claim 4, wherein the bell is made of plastic.

7. (previously presented): The carrying device according to claim 4, further including a circular spring that encircles the bell at a lower end of the claws to pull them radially inward.

8. (previously presented): The carrying device according to claim 1, wherein the gripping device is rotatably mounted around its axis on the carrying device, the carrying device further including,

an ejection means, which is operative to loosen the preform from the gripping device, the ejection means being arranged above the gripping device and having at least one ejection finger which extends axially downward, and being provided with means for axially displacing the gripping device and the ejection means in such a way that, during a relative ejection stroke, the ejection finger is placed against the preform in order to move it axially downward with respect to the gripping device.

9. (previously presented): The carrying device according to claim 8, wherein the gripping device is mounted so as to be axially movable on the carrying device, and the ejection means is attached axially, but rotatably movable with respect to the carrying device.

10. (previously presented): The carrying device according to claim 8, wherein during the relative ejection stroke, the ejection finger passes through an orifice in an upper plate of the gripping bell and is received in an aperture made in a periphery of the core.

11. (currently amended): A temperature conditioned oven for a plastic container, comprising:

a carrying device, said carrying device including:

a gripping device having gripping claws which are closable around an outer surface of a neck of a preform to hold the preform;

an inner core which is adapted to penetrate axially inside the neck of the preform, the inner core having a lower transverse surface which forms a reflecting surface for reflecting heating energy provided by the oven; and

the inner core comprising at least one fin which extends radially and is operative to dissipate heat that is absorbed by the inner core, such that an open channel radially extends from an inner portion of the core along the at least one fin to the neck of the preform to provide an open space inside the preform which is bound by an inner periphery of the neck.

12. (previously presented): The carrying device according to claim 1, wherein when the preform is in the gripping device, the lower transverse surface is substantially axially situated at the boundary between the neck and the body of the preform.

13. (previously presented): The carrying device according to claim 1, wherein the lower transverse surface of the core forms a reflecting surface for reflecting heating energy provided by the oven.

14. (previously presented): The carrying device according to claim 1, wherein a plurality of fins are provided, such that the adjacent fins are separated by a groove.

15. (previously presented): The carrying device according to claim 1, wherein the gripping device includes radially extending slot portions which allow for the gripping device to elastically deform so as to engage the tubular neck of the preform.

16. (previously presented): A carrying device for carrying a preform in a temperature condition oven for blow forming containers made of thermoplastic material, the preform being obtained by injection molding and including a body with a tubular neck, the carrying device comprising:

a gripping device having gripping claws which are closable around an outer surface of the neck to hold the preform; and

an inner core which is adapted to penetrate axially inside the neck of the preform, the inner core having a lower transverse surface which, when the preform is in the gripping device, is substantially axially situated at a boundary between the neck and body of the preform,

wherein the lower transverse surface forms a reflecting surface for reflecting the heating energy provided by the oven,

wherein the gripping claws are made in the form of a bell open at the bottom, inside of which, the neck of the preform is axially engaged, the bell being provided with a series of radial slots that are angularly distributed so as to delimit, between two successive slots, one of the gripping claws, which is elastically radially deformable, and

wherein a circular spring is provided which encircles the bell at a lower end of the claws to pull the claws radially inward.

17. (previously presented): A carrying device for carrying a preform in a temperature condition oven for blow forming containers made of thermoplastic material, the preform being obtained by injection molding and including a body with a tubular neck, the carrying device comprising:

a gripping device having gripping claws which are closable around an outer surface of the neck to hold the preform;

an inner core which is adapted to penetrate axially inside the neck of the preform, the inner core having a lower transverse surface which, when the preform is in the gripping device, is substantially axially situated at a boundary between the neck and body of the preform, the lower transverse surface forming a reflecting surface for reflecting the heating energy provided by the oven;

an ejection means which is operable to loosen the preform from the gripping device, the ejection means being arranged above the gripping device and having at least one ejection finger which extends axially downward, such that the at least one ejection finger abuts an edge of the neck of the preform; and

means for axially displacing the gripping device and the ejection means in such a way that, during a relative ejection stroke, the ejection finger is placed against the preform so as to move it axially downward with respect to the gripping device,

wherein during a relative ejection stroke, the ejection finger passes through an orifice in an upper plate of the gripping bell and is received in an aperture made in a periphery of the core.

18. (previously presented): The carrying device according to claim 17, wherein the gripping device is rotatably mounted around its axis on the carrying device.

19. (previously presented): A carrying device for carrying a preform in an oven, the preform including a body and a tubular neck, the carrying device comprising:

a gripping device having gripping claws which enclose an outer surface of the neck to hold the preform, the gripping claws being made in the form of a bell open at the bottom, inside of which, the neck of the preform is axially engageable;

an inner core which is adapted to penetrate axially inside the neck of the preform, the inner core having a lower transverse surface; and

an ejection finger which extends downward such that during a relative ejection stroke, the ejection finger passes through an orifice in an upper plate of the gripping bell and is received in an opening made in a periphery of the core so as to press against the preform.

20. (previously presented): The carrying device according to claim 1, wherein the lower transverse surface of the inner core is disposed to be axially situated at a boundary between the neck and the body of the preform when the preform is in place on the gripping device.

21. (previously presented): The carrying device according to claim 1, wherein the lower transverse surface is flat.

22. (previously presented): A temperature conditioned oven for a plastic container according to claim 11, wherein the lower transverse surface of the inner core is disposed to be axially situated at a boundary between the neck and a body of the preform when the preform is in place on the gripping device.

23. (previously presented): The temperature conditioned oven according to claim 11, wherein the lower transverse surface is flat.

24. (previously presented): The carrying device according to claim 17, wherein the lower transverse surface of the inner core is disposed to be axially situated at a boundary between the neck and the body of the preform when the preform is in place on the gripping device.

25. (previously presented): The carrying device according to claim 17, wherein the lower transverse surface is flat.